Date:

PATIENT INFORMATION

Name:	Race:
Age:	Address:
Gender:	Date & time of admission:
Informer:	Who is taking care: (do you stay with the patient?)

CHIEF COMPLAINT

The patient was admitted to HPD due to _____________________________________.

HISTORY OF PRESENTING ILLNESS

3 most important **symptoms** + chronological order (time)

⇨ Site	- Effect (Association)
⇨ Onset (Gradual / acute)	- Previous episode
⇨ Character (Dull, colicky)	- Severity (Mild / severe; Rate)
⇨ Relieve	- Pain: rate
⇨ Aggravate	- What test done?
⇨ Time (When happen? Duration)	- Did it happen again? How many times happen?

If receiving medication, record the name of the drug, dose, frequency of administration, & response to medication

Cough
- mode of onset, time of onset
- duration(days/weeks/months/years)
- dry, moist, productive – sputum(rarely),
- spasmodic, paroxysmal whooping, barking
- precipitating/exacerbating factors
- relieving factors
- diurnal-nocturnal/early morning or seasonal variation
- associated sx: fever, running nose, DOB, noisy breathing (wheeze/stridor), cyanosis, ep of choking

Dyspnoea: abnormally uncomfortable awareness of breathing - laboured breathing
- Mode of onset - acute/chronic
- Duration - hrs/days/months/years
- Progression
- Pattern - nocturnal
- Aggravating /Relieving factors - triggered by a particular activity, situation, SOBAR, SOBOE, orthopnoea
- Severity - apnoea, pallor, cyanosis, grunting, fast breathing, chest indrawing, use of accessary muscles, nasal flaring, restlessness, drowsy, convulsion, unable to drink/suck
- Associated - CVS, others - Haemato, Renal

Date:

Respiratory Distress

Normal RR (/min)
- Age less than 1 yr = 30-40
- 1- 2yr =25- 35
- 2-5 = 25-30
- 5-12 = 20-25
- >12 = 15-20

Tachypnoea
- Neonate(<1 month)= >60
- Infant (<1 year) = >50
- Children (>1 year)= >40

Noisy breathing

Wheeze	Stridor
• High pitched musical whistling sound	• Harsh vibratory sound of variable pitch
• Expiratory	• Inspiratoy phase
• Turbulent airflow through narrow airways	• Turbulent airflow through narrow – partial obstruction of extrathoracic upper airway
• Intrathoracic trachea & major bronchi -terminal bronchioles	
• Common in infant & young	• Common in infant &young child child

Wheeze

- Age - Infant, Toddler, Preschool -> transient infant wheeze, viral bronchiolitis
  - School age children -> atopy, asthma, infection
- Onset*- acute /recurrent
- Precipitated/trigger – exercise/cold air/URI infection -> asthma
- Pattern - day/nocturnal, exercise induced, after feeding
- Severity - unrelieved by medication, use nebulizer

(Older child) -> restriction of daily activities, how much school has been missed, sleep disturbance

(Infant)-> poor feeding, sweating, regurgitation, failure to thrive, cyanosis, chest indrawing, excessive sleepiness

If poor feeding, assess changes in normal and current intake, any increased effort, duration of feeding, sleepiness

- Associated factors - cough, rapid laboured breathing, chest pain, nausea, vomiting, delayed feeding, coughing with reflux eg. TE fistula, CP
- Contact with URTI

Stridor

- Age
- Onset* -acute/chronic -> obstruction, infection/congenital
- Persistent/fixed
- Preceding symptoms -> fever, coryza, sore throat, barking cough (croups) rash, itching, sneezing, facial swelling (angioneurotic oedema)
- Worse at night*
- Episode of choking, gagging, coughing eg. F/B
- Difficulty in swallowing, pain eg. retropharyngeal abscess
- Can’t speak , acutely ill, drooling of saliva eg. epiglottitis
- Hoarseness of voice eg. croups
- Weak cry
- Delayed feeding, coughing with reflux

Date:

Bronchial asthma:

Clinical History / Asthma Diary	**Physical Examination**	
	Signs of chronic illness	**Signs in acute exacerbation**
○ Current symptoms ○ Pattern of symptoms ○ Precipitating factors ○ Present treatment ○ Previous hospital admission ○ Typical exacerbations ○ Home/ school environment ○ Impact on life style ○ History of atopy ○ Response to prior treatment ○ Prolonged URTI symptoms ○ Family history	○ Harrison's sulci ○ Hyperinflated chest ○ Eczema / dry skin ○ Hypertrophied turbinates	○ Tachypnoea ○ Wheeze, rhonchi ○ Hyperinflated chest ○ Accessory muscles ○ Cyanosis ○ Drowsiness ○ Tachycardia

Key features for high probability of asthma:
- Symptoms worse at night & in the early morning
- Symptoms that have nonviral triggers
- Interval symptoms: symptoms between acute exacerbations
- Personal / family hx of atopic ds
- Positive response to asthma therapy

Common triggers:
- Environmental allergens
  - House dust mites, animal dander, insects like cockroach, mould and pollen.
- Hygienic practice
  - Damp dusting, frequent laundering of bedding with hot water, encase pillow/mattresses with plastic/vinyl covers, remove carpets from bedrooms, frequent vacuuming, remove pets from the household.
- Cigarette smoke / vape / shisha exposure from family?
- Respiratory tract infections – commonest trigger in children.
- Food allergy - uncommon trigger, in 1-2% of children
- Exercise: any β_2-agonist taken prior to strenuous exercise.

Date:

GI:

- Timing of the problem: onset, frequency, time of day, and duration. Is it ongoing? Has it happened before? If so, characterize.
- Pinpoint location of the symptoms or pain as much as possible, and ask about position, quality, radiation, and severity.
- Aggravating & alleviating factors: “does anything seem to make it better or make it worse?”
  - Is the pain better with food or worsened with consumption of food? Bowel movements? School avoidance?
  - Current medications: prescriptions (type, indication, dose, frequency), OTC drugs (including ORS).
- Associated symptoms:
  - Vomiting, character (projectile / forceful), colour (clear / bilious / bloody), amount, regurgitation
    - If the vomitus contains only fluid ➔ shock due to dehydration
    - Bloody vomitus ➔ perforated ulcer, oesophagitis, laceration, Mallory Weiss
    - Projectile vomiting ➔ IO
  - Abdominal pain or discomfort, abdominal distension,
    - Some pain is a danger sign of certain diseases e.g. IO (can go into gangrene), dengue fever (warning sign of dehydration)
    - Is this presentation of the disease or effect/complication of the disease?
    - Is this surgical abdominal pain (acute appendicitis, IO – these need to be treated urgently) or medical abdominal pain (AGE, reduced blood flow to mesenteric artery in impending shock, dengue fever, DKA, due to other organ e.g. hepatomegaly)?
  - Bowel movement patterns, diaper changes, stool character & colour (red, black, brown, steatorrhea/fatty)
    - Diarrhoea
      - Bloody diarrhoea – it is always pathological, caused by infection, surgical problem e.g. IO due to volvulus or intussusception, redcurrant jelly (stool mixed with blood and mucus in intussusception)
      - Non-bloody diarrhoea – worry about the dehydration
- How have the symptoms affected the child’s appetite, sleeping patterns, or ability to play?
- Complications caused by both vomiting and diarrhoea – **what happened to the patient before hospital? – WHAT ARE THE SIGNS OF DEHYDRATION AT HOME?**
  - **Dehydration** – ask the mother first to confirm the amount of fluid loss and patient’s status; presence/absence of these symptoms helps to classify the dehydration (mild/moderate/severe) before patient comes to hospital
  - **Estimate dehydration** – ask the amount, frequency, S&S of dehydration (hypovolemic shock or impending shock), fever
  - **Effect of dehydration to the brain** – stuporous, unconscious, fits
  - **Effect of dehydration to the heart** – palpitations
  - **Effect of dehydration to the respi** – tachypnoea (dehydration leads to metabolic acidosis, to compensate the metabolic acidosis, the patient must breathe fast to get rid of the CO2)
  - **Effects to the MSK** – weakness, skin turgor

⇨ **What happened to the patient when come to hospital?** If the patient being treated at other places before coming to hospital ➔ **clinical sequences**

- Ask the mother about what the doctors examined? – examine the abdomen, eyes, BP, pulse rate
- Results from the examination?
- What was told by the doctors? the doctors impression e.g. food poisoning with mild dehydration
- What the doctor did (investigations & treatment)? E.g. give ORS and allowed to go home (means the dehydration is only mild or moderate at that point of time)

⇨ This patient was discharged from previous hospital ➔ **need to tell what happened after that**

Date:

- ⇨ In ED ➔ **ask the mother again what happened and what were done & given in the ED? WHAT HAPPENED IN ED WHEN THE PATIENT FIRST CAME IN?**
  - Because whenever you want to say whether this patient is in mild/moderate/severe dehydration is at the point when the patient comes to the ED, not at the point when you examine patient where patient no longer in dehydration state
  - Classify the patient into 4 – mild/moderate/severe/impending shock dehydration
    - Ask the mother what doctor told at that point of time?
    - How they managed? – given resuscitation fluid 20ml/kg fast (means patient came in with shock); given replacement (based on how many % of dehydration at that point of time) and maintenance fluid of ongoing loss (means patient still conscious and stable)
    - Based on the result given in this patient, he had at least severe dehydration because he already goes into metabolic acidosis
    - What was given? How much given? The patient improved or not?
    - What the doctor told and reasons for admission?

- ⇨ **What is the possible cause here?**
    - For food poisoning, there should be within incubation period (minimum 4 hours, maximum 2-3 days) as the organism takes time to grow and proliferate
    - There is usually point source in food poisoning, means that if 3 people eating the same food, at least 2 of them will get the diarrhoea; if 10 people eat, but only 1 person diarrhoea, means the food is not the source
    - ASK for any similar symptoms (abdominal pain, vomiting, diarrhoea) presented by others
    - Hence in **INTRODUCTORY DATA**, you can start with ➔ who has history of taken outside food 6 hours earlier presented with abdominal pain, vomiting and diarrhoea

- Rotavirus vaccination?
- Social
  - Sick contact: Whether anyone in the family had the same meal and has the same problems
  - Hygiene of parents & child: Hand, pacifier, bottle
  - Food source: raw, cooked, takeaway
    - Where they buy the food?
    - From the stall?
    - Whether the hygiene status of the place is reliable?
    - Order from grabfood?
  - Adequate water supply
  - Personal habits: nail biting, thumbsucking, caffeine
  - Type of home
  - Socioeconomic status of family

Date:

SYSTEMIC REVIEW

General	Fever, tachypnoea, lethargy / drowsy, on drip since ____ until ____ Weight – recent changes, weight at birth, loss of appetite Dehydrated: cracked lips, sunken eyes, history of thirst How many IV volume within ____ hours Assess 24 hour intake & output DON'T mention: alert, conscious, well oriented, respiratory distress
Haematology	Bruising easily, jaundice, bone pain, blood clot
Skin & lymph	Rashes, adenopathy, lumps, bruising and bleeding, pigmentation changes
HEENT	Headaches, concussions, unusual head shape, Strabismus, conjunctivitis, visual problems, Hearing, ear infections, draining ears, Cold & sore throats, tonsillitis, mouth breathing, snoring, apnoea, oral thrush, epistaxis, caries
CVS	Chest pain, cyanosis, dyspnoea, heart murmurs, palpitation, sweating, exercise intolerance DON'T mention: orthopnoea (unless older child), ankle swelling
Resp.	Any cough? If yes, - sputum (color, amount, smell, blood) yellowish, copious amount, - presence of blood Chest pain, DOB (young infant), SOB (school going age), fast breathing (may be due metabolic acidosis), wheezing
GI	Nausea, vomit, abd pain with a pain score of ____ (older child), abd distension, appetite Diarrhoea, difficulty in swallowing, reduced feeding, haematemesis, melaena (tarry stool) Stool colour and character Jaundice
Genitourinary	Urine – color Frequency – how many times Dysuria, urgency, haematuria, back/loin pain, tears production (crying) Unable to control urination Facial oedema
MSK	Muscle weakness/pain, joint pain, bone pain, numbness, paralysis/loss of function, gait changes
CNS	Headache, dizzy (pening), faint (older child) Hearing / visual disturbance Speech problem/slurred speech Episodes of fits / convulsions Weakness – limbs, tremors, abnormal behavior
Endo	Heat / cold intolerance, loss of weight / increase appetite Sweat excessively, nervous, muscle weakness Thirsty / polydipsia Blurring of vision Faint associated with tremble, weakness, intense hunger, palpitations, speaking difficulty Swelling in the neck / eyelids, hoarseness of voice Unusual pigmentation, lethargy, sudden weight loss

Date:

Progress of the patient – includes the secondary natural hx after admission to the ward, to see whether the patient improve with treatment

- What do we expect by 12 hours? When the patient was given 10% rehydration fluid + maintenance + ongoing loss
    - The rehydration fluid should be completed
    - Maintenance fluid should be given half already
    - Ongoing loss depends on what happened whether the child is still vomiting or diarrhoea
- What do you expect by 12 hours now?
    - There should NOT be any signs of dehydration
    - If there is still signs of dehydration – means either the fluid was not given well or the dehydration that patient has is not the ordinary dehydration e.g. hypertonic dehydration where the doctor may give longer period of rehydration fluid

PAEDIATRICS HISTORY

Antenatal: (uneventful)

- The mother was ______ years old when she was pregnant, in ____________(when).
- She attended all the antenatal check-ups, every _______________ and claims the fetal development was normal and healthy.
- The mother did not have any complications during pregnancy.
- Maternal health during pregnancy: bleeding, trauma, hypertension, fevers, infectious illnesses, medications, drugs, alcohol, smoking, rupture of membranes, candidiasis, UTI
- The mother was diagnosed with _______________ during _________ weeks of pregnancy at _______________ and was on _______________ (meds).
- She also took supplements like ___________________.
- Medications, vitamins, diet, alcohol use, tobacco use, stresses.
- Rh serology, mother's previous pregnancy history.

Postnatal:

- The patient was delivered via SVD / IVD / assisted VD with forceps / vacuum / breech delivery / ELLSCS at ________ weeks gestation, due to term / fetal distress
- His / her birth weight was ____________.
- The was no congenital anomalies seen.
- The patient has history of jaundice for ____________ days, did / did not undergo phototherapy.
- Other complications:
    - Presence of meconium.
    - breathing problems, use of oxygen,
    - need for intensive care, length of stay
    - birth injuries, haemorrhage
    - feeding problems,
    - Presence of convulsions

Age	Motor development		Speech development	Social development / cognitive development
	Gross motor	Fine motor		
1.5 y	Starts to run Learns to walk backwards with help	Stacks up to 4 blocks Uses spoon & cup	Knows 10–50 w	Plays pretend
2 y	Walks up & down, stepping with both feet on each step Kicks ball Jumps	Stacks up to 6 blocks Draws a line	Knows ≥ 50 w Uses sentences of up to 2 w	Engages in parallel play (2–3 y) Moves away & comes back to the parent Follows 2-step commands Removes clothes
3 y	Alternates feet when walking up & down the stairs Pedals a tricycle	Stacks up to 9 blocks Copies a circle	Mostly intelligible speech Knows ≥ 300 w, understands > 1000 w Uses sentences of up to 3 w	Understands gender difference Brushes teeth & grooms self Has bladder & bowel control Plays away from parents
4 y	Hops on one foot Catches and throws ball overhand	Copies a square	Tells complex stories Can identify some colours & numbers	Plays cooperatively May have imaginary friends
5 y	Skips	Copies a triangle Can tie shoelaces Can write some letters	Speaks fluently Counts ≥ 10 things Uses sentences of up to 5w	Learns how to read Understands directions (lt & rt) Plays dress up

DEVELOPMENT HISTORY

Age	Gross motor	Fine motor	Language	Social/Cognitive
2 mo	Raises head & chest when prone	Follows objects past midline	Coos	Smiles back (social smile) Recognizes parents
4 mo	Holds head straight Rolls over front to back Props himself/herself up on wrists in prone position	Holds & shakes rattle	Laughs Makes consonant sounds	Localizes sound
6 mo	Sits without support Rolls over back to the front	Grabs & transfers objects from 1 hand to the other Raking grasp	Babbles	Develops stranger anxiety (6–9 mo) Develops object permanence (6–9 mo)
9 mo	Crawls Stands when holding on to something	Pincer grasps (9-12 months)	Says “ma-ma,” “da-da”	Orients to name Imitates actions Has separation anxiety (considered normal until 3 y/o)
12 mo	Starts to walk Can throw objects	Points at objects	Knows 1–5 words	Follows simple commands (e.g., “Come to mommy”.)

Date:

DIET / NUTRITIONAL HISTORY

The mother started exclusive breastfed him until ___ years of age, because of ___________________.
The mother started mixing with formula milk at the age of ____, with the brand _________________.
The mother explained s/he drinks _______ ounces, every _____ hours / during demand.
She started introducing weaning at the age of ___________ months.
She fed him/her with __________________________, every _____________ hours.
S/he has no history of any food allergy. – dairy products, seafood
Appetite (likes and dislikes), eating habits, food variety, fruit and vegetable consumption, protein, "junk" food.

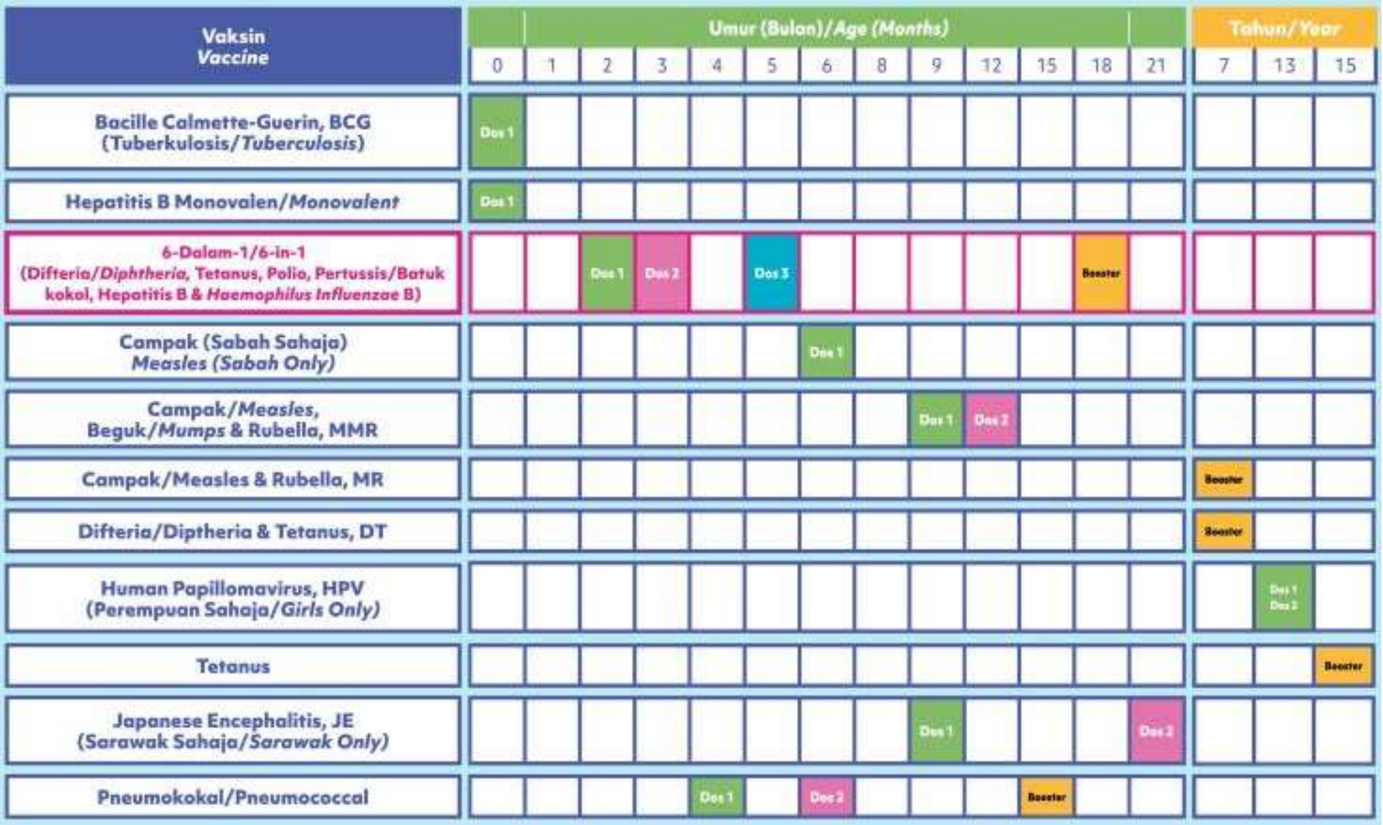
PAST MEDICAL HISTORY & PAST SURGICAL HISTORY

Screening: G6PD, congenital hypothyroidism, infective screening (HIV, Hep B), genetic.)
The patient was not hospitalised before.
This is the 4th hospitalization. The patient had 3 previous hospitalization.
The patient was hospitalize during _____________ for ____________________. How frequent:
Any history of trauma – fractures, lacerations.

IMMUNIZATION HISTORY

The patient's immunization status is up to date, with his/her last immunization to be ______________ at the age of ___ years old. The mother claimed he/she did not experience any fever / rash after the vaccination. **(need to mention when was the last immunization because you want to tell the examiner you know the immunization schedule)**

If AGE, any Rotavirus vaccine?



Vaksin *Vaccine*	Umur (Bulan)/*Age (Months)*													Tahun/*Year*		
	0	1	2	3	4	5	6	8	9	12	15	18	21	7	13	15
Bacille Calmette-Guerin, BCG (Tuberkulosis/*Tuberculosis*)	Dos 1															
Hepatitis B Monovalen/*Monovalent*	Dos 1															
6-Dalam-1/6-in-1 (Difteria/*Diphtheria*, Tetanus, Polio, Pertussis/Batuk kokol, Hepatitis B & *Haemophilus Influenzae* B)			Dos 1	Dos 2		Dos 3						Booster				
Campak (Sabah Sahaja) *Measles (Sabah Only)*							Dos 1									
Campak/*Measles*, Beguk/*Mumps* & Rubella, MMR									Dos 1	Dos 2						
Campak/Measles & Rubella, MR														Booster		
Difteria/Diptheria & Tetanus, DT														Booster		
Human Papillomavirus, HPV (Perempuan Sahaja/*Girls Only*)															Dos 1 Dos 2	
Tetanus																Booster
Japanese Encephalitis, JE (Sarawak Sahaja/*Sarawak Only*)									Dos 1				Dos 2			
Pneumokokal/Pneumococcal					Dos 1		Dos 2				Booster					

Date:

DRUG HISTORY

Previously, the patient took ______________________ for _______________.
Currently, the patient is taking ____________________________________.
The patient has no history of any drug allergy.
The patient also has no history of consuming any over the counter medication, traditional medicine or any supplements.
Supplements: ____________________________________
Compliance, dosage, frequency, technique

FAMILY HISTORY

There is no consanguinity between his parents.
My patient is the _______ child. Is the child biological or adopted?
He/she has ________ brothers and _________ sisters.
All the siblings are alive and healthy, and do not have the illness.
My patients parents are healthy.
Mother has: __________________ diagnosed since ___________.
Father has: __________________ diagnosed in ____________.
The family members were all healthy and had no other illnesses.
Illnesses: Cardiac disease, hypertension, stroke, diabetes, cancer, abnormal bleeding, allergy, asthma, epilepsy, COVID-19
Others: Mental retardation, congenital anomalies, chromosomal problems, growth problems.
Sick contact: Ask if anyone at home is sick, the nature of the illness, and if the child attends daycare.

SOCIAL HISTORY

The mother is ___ years old, and is a ____________. Level of education:
The father is ___ years old, and work as _______________. Level of education:
He is not a smoker / is a smoker for ___ years / was a smoker for ___ years and quit in ______ (year).
My patient stays together with his/her parents and siblings with grandparents at ________________.
Housing area?
The mother claims they are financially stable, with no difficulty in transportation as they have a car.
My patient is currently in kindergarten / primary school at ______________________.
The mother claims he/she is very sociable and active.
In terms of lifestyle, the mother claims his/her education is normal, stress?, does exercise.
For past travel history, they went to _____________ during _____________ for _______________.

PHYSICAL EXAMINATION

GENERAL INSPECTION

- Laying comfortable / crying/alert (well oriented) / conscious/blank appearance / cooperative/good rapport/irritable
- No respiratory distress / in pain / cyanotic / tachypnea / jaundice
- Any instruments attached: Neb, MDI, branula at cubital fossa with / without IV drip on, nasal prong, sputum pot
- Patient nutritional and hydration state seem to be fair
- No any dysmorphic features and no nasal flaring.

Date:

ANTHROPOMETRY MEASUREMENTS

Height: Weight: HC: Appropriate with age?

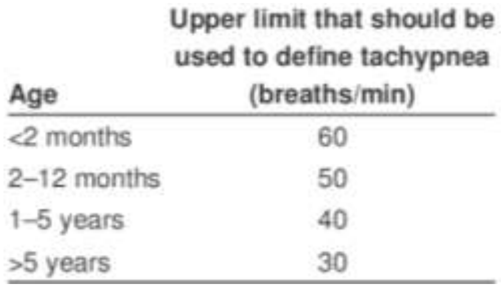
VITAL SIGNS

- Pulse: beats / minute - Temperature: degree Celsius
- Respiratory rate: breaths / minute - Blood pressure: / mm Hg

GENERAL EXAMINATION

SKIN

- Birthmarks - nevi, haemangiomas, Mongolian spots etc
- Rashes, petechiae, desquamation, pigmentation, jaundice, texture, turgor
- Scars or injuries, especially in patterns suggestive of abuse



Age	Upper limit that should be used to define tachypnea (breaths/min)
<2 months	60
2–12 months	50
1–5 years	40
>5 years	30

HEAD: Check anterior fontanelle

FACE: Yellow**.** Flushing / redness

EYES: No pallor, jaundice, sunken eyes, periorbital edema.

EARS & NOSE: No discharge, no nasal polyps, no alae nasi flaring

MOUTH & THROAT

- No dental caries, no angular stomatitis, no central cyanosis, oral ulcer, caries, gingivitis
- The lips looked pinkish.
- Buccal mucosa (color, vesicles, moist or dry)
- Tonsils (size, color, exudates)
- Posterior pharyngeal wall (color, lymph hyperplasia, bulging)

NECK (>3 y)

- Trachea: gently place index finger b/t the trachea & the sternal head of the sternocleidomastoid on each side and seeing if the gap on both side is equal
- No tracheal deviation, no palpable lymph nodes. No raised JVP & masses (cysts/nodes).
- Presence or absence of nuchal rigidity.
- Neck gland enlargement – in prolonged fever (Kawasaki, TB)

HANDS

- Warm / cold
- Peripheral cyanosis, clubbing, leukonychia, koilonychias, normal CRT
- Flapping / fine tremor
- Pallor, palmar erythema
- Edema

LEG

Pedal edema (medial malleolus & 1/3 of shin)/ Club foot / bruises / rash / pigmentation

Date:

CARDIOVASCULAR SYSTEM

INSPECTION: Chest wall – deformity / symmetry / surgical scar / visible pulsation

PALPATION:

- Apex beat is felt at 5th left intercostal space at midclavicular line.
- Upon palpation, apex beat was normal
- No heaves & thrills.

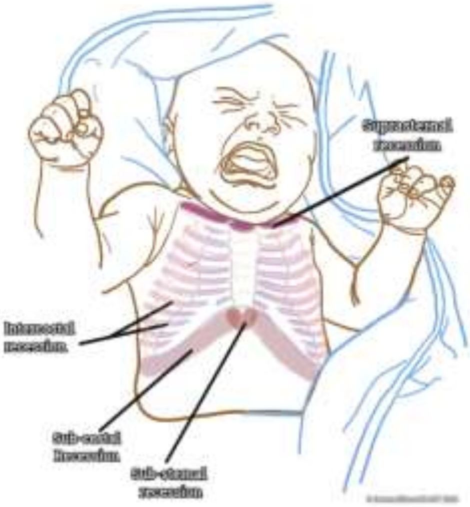
AUSCULTATION:

- 1st and 2nd heart sound is heard
- Murmur: pan systolic / systolic / diastolic – not radiated to coronary artery and axillary area.
- Added heart sound:

RESPIRATORY SYSTEM

INSPECTION:

- Chest wall deformity – pectus carinatum, pectus excavatum, Harrison's sulcus
- Observe AP & laterally: AP to transverse diameter is 0.6 (>0.6 is hyperinflated chest)
- Surgical scars including axilla / moved symmetrically on respiration.
- Breathing in infants: abdominal & periodic (pause < 15 seconds)
- Recession: suprasternal, intercoastal, subcoastal, substernal
- Use of accessory muscles: retraction location, nasal flaring
- Noisy breathing: wheezing, stridor, grunting
- BA: Eczema, allergic rhinitis, polyps



PALPATION:

- Apex beat felt at 5th left intercostal space at midclavicular line.
- Organomegaly (liver beyond 5th intercoastal, spleen)
- Chest expansion normal on respiration & symmetrical
- Vocal fremitus (99, 11)
- BA: normal btw attacks,
  in long standing attacks: hyperinflated + Harrison's sulci

PERCUSSION:

- Percuss clavicle & along the imaginary midclavicular line
- **Resonance:** on percussion on both sides including lateral sides (1st to 4th intercoastal)
- **Dullness:** felt on lower edge of right side intercostal due to presence of liver.

AUSCULTATION:

⇨ Below clavicle, nipple line & lateral (6 areas)

⇨ Finding:

  ○ Breath sounds: Normal vesicular breath / bronchial breath sound heard.

  ○ Abnormal breath sound: Long expiratory phase

  ○ Additional breath sound: Wheezing? Crackles? Stridor? Rhonchi? Which zone? Localized or generalized?

⇨ Interpretation: No basal crepitation heard upon auscultation. Normal vocal resonance. No rhonchi heard.

Date:

NEUROLOGICAL SYSTEM

INSPECTION

- Limbs: symmetrical
- No muscle wasting / hypertrophy
- Any involuntary movements, fasciculation, tremor
- Back: Sacral dimple, kyphosis, lordosis or scoliosis

MUSCLE TONE : Normal / hypertonia / hypotonia – upper & lower limbs; Any clonus

MUSCLE POWER: Normal power (5/5)

REFLEXES: Biceps, knee, ankle, plantar reflex

COORDINATION

- All cranial nerves was tested to be normal. There is no cerebellum defects.
- Balance & coordination

GAIT: Normal walking.

- ⇨ In-toeing, out-toeing
- ⇨ Bow legs, knock knee: "Physiologic" bowing is frequently seen < 2 y of age & will spontaneously resolve
- ⇨ Limp

ABDOMINAL EXAMINATION + DEHYDRATION STATUS

- Mention when you do the examination e.g. done 12 hours after admission (hence in ordinary treatment of dehydration – the rehydration should be completed by 12 hours, not correct over 24 or 48 hours unless it is hypernatremic dehydration)
- What do you expect by now at 12 hours of admission?
    - There shouldn't be any dehydration – well and conscious, normal skin turgor, normal BP/HR/RR
    - Patient is on maintenance fluid at the moment

INSPECTION

- Offer water or observe if eager in feeding
- Sunken eyes
- Distension or flat / scars / visible veins / moves with respiration
- Umbilicus – center / deviated ; inverted / everted

PALPATION

- Skin turgor?
- Abdomen is soft, non-tender – all 9 quadrants
- Any palpable mass in the nine quadrants.
- There is no enlarged liver, spleen
- Kidney – ballotable?

PERCUSSION

- No shifting dullness, hence no ascites.

AUSCULTATION

- Normal bowel sound is heard.
- No renal bruits.

Date:

SUMMARY

➔ This patient has history of taken outside food 6 hours earlier

➔ presented with abdominal pain, vomiting and diarrhoea

➔ develop complications of dehydration

➔ what was diagnosed at ED whether there is severe dehydration,

➔ what treatment was given at ward, whether the treatment is adequate

➔ progress (the child progresses well)

• If you got the examination findings on admission + examination findings during your presentation – to show that there is an improvement

DIAGNOSIS, INVESTIGATION & MANAGEMENT

Pneumonia:

- Etiology
  - Viral: RSV, Influenza A or B, Adenovirus, Parainfluenza virus
  - Bacteria:
    - Newborns: Group B streptococcus, E. coli, Klebsiella sp, Enterobacteriaceae
    - Infants 1- 3 months: Chlamydia trachomatis
    - Preschool age: Streptococcus pneumoniae, Hib, Staphylococcal aureus; Less common: Group A Streptococcus, Moraxella catarrhalis, Ps aeruginosa
    - School age: Mycoplasma pneumoniae, Chlamydia pneumoniae
- Severity

Age < 2 months	Age 2 months - 5 years
Severe Pneumonia:	Mild Pneumonia:
▪ Severe chest indrawing	• Tachypnoea
▪ Tachypnoea	Severe Pneumonia:
	• Chest indrawing
Very Severe Pneumonia	Very Severe Pneumonia
• Not feeding	• Not able to drink
• Convulsions	• Convulsions
• Abnormally sleepy, difficult to wake	• Drowsiness
• Fever, or Hypothermia	• Malnutrition

- Assessment:
  - CXR: patchy consolidations
  - WBC: Neutrophil – bacterial, Lymphocyte – viral cause or severe infection.
  - Blood culture
  - Pleural fluid analysis
  - Serological tests
    - Mycoplasma pneumoniae, Chlamydia, Legionella, Moraxella catarrhalis
- Management
  - Pulse oximetry: to assess hypoxia
  - Ab:
    - Streptococcus pneumonia: Penicillin, cephalosporins
    - Haemophilus influenzae type b: Ampicillin, chloramphenicol, cephalosporins
    - Staphylococcus aureus: Cloxacillin
    - Group A Streptococcus: Penicillin, cephalosporin
    - Mycoplasma pneumoniae Chlamydia pneumoniae, Bordetella pertussis:
    - Macrolides, e.g. erythromycin, azithromycin

Date:

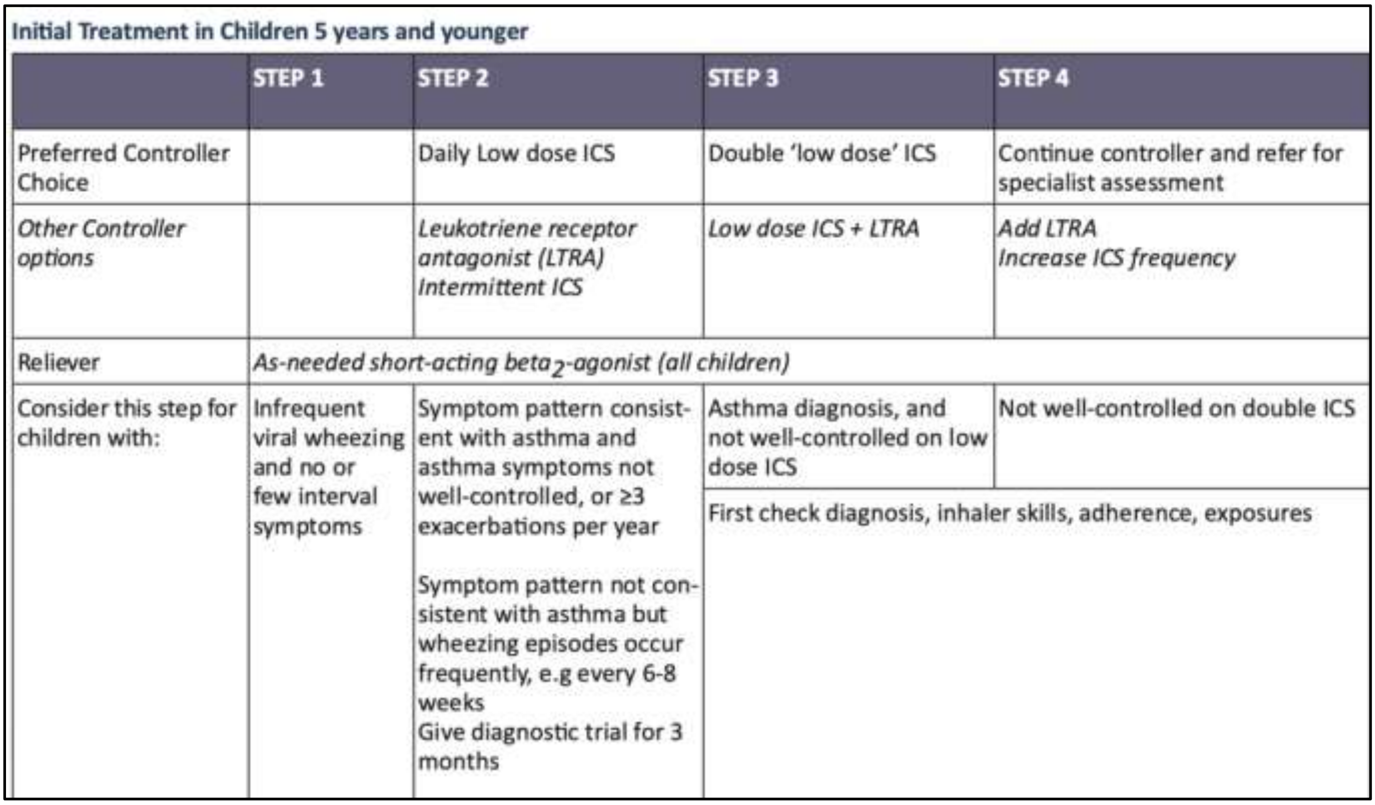
Bronchiolitis:

- Infants aged 1 to 6 months old
- RSV: commonest cause of acute bronchiolitis in Malaysia
- A mild coryza, low grade fever and dry cough.
- Tenderness in chest due to coughing
- Tachypnoea, chest wall recession, wheeze and respiratory distress subsequently develop
- The chest may be hyperinflated
- Auscultation: fine crepitations and sometimes rhonchi.
- CXR: Hyperinflation, segmental collapse/consolidation, lobar collapse/consolidation.
- Management:
  - Arterial oxygenation by pulse oximetry (SpO_2): maintained above 93%.
    - Administer supplemental humidified oxygen if necessary.
    - Monitor for signs of impending respiratory failure:
      - Inability to maintain satisfactory SpO_2 on inspired oxygen > 40%, or a rising pCO_2.
  - Feeding: Small frequent feeds as tolerated
    - Nasogastric feeding: Moderate respiratory distress
    - IV fluids: severe respiratory distress, cyanosis & apnoea.
- Pharmacotherapy
  - 3% saline solution via nebulizer
  - Inhaled β_2-agonists: A trial of nebulised β_2-agonist, given in oxygen, may be considered in infants with viral bronchiolitis. Vigilant & regular assessment of the child.
  - Antibiotics are recommended for all infants with
    - Recurrent apnoea and circulatory impairment.
    - Possibility of septicaemia.
    - Acute clinical deterioration.
    - High white cell count.
    - Progressive infiltrative changes on chest radiograph.

Post-RSV wheeze:

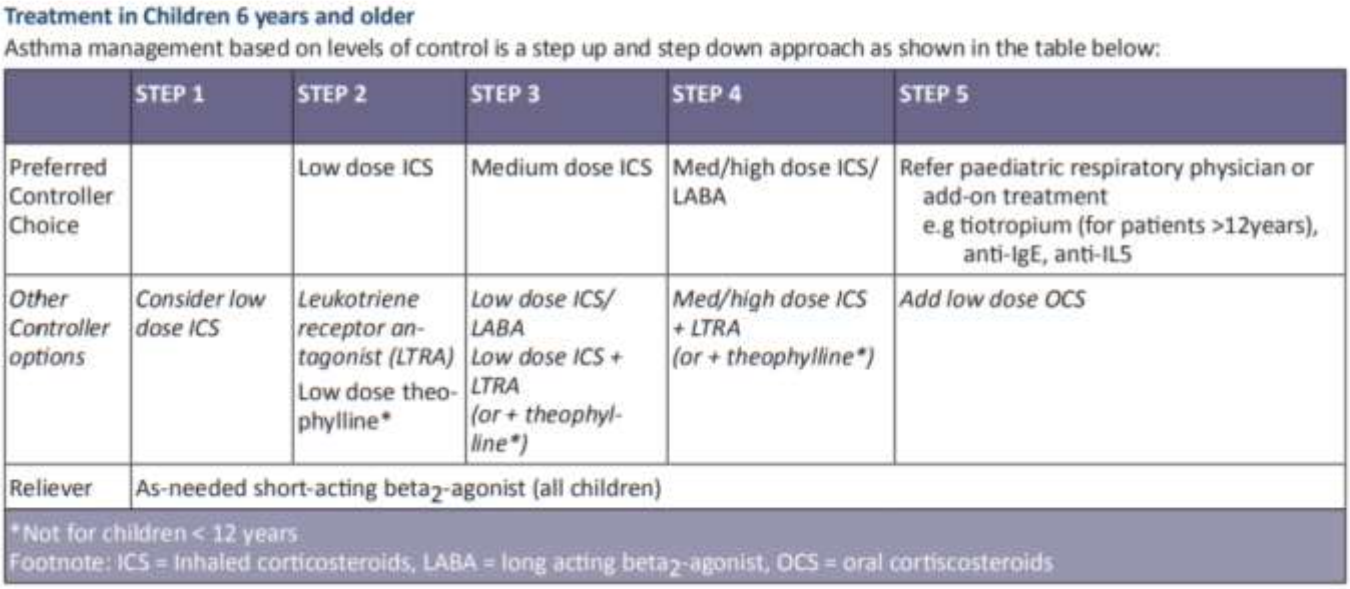
Date:

BA:



Initial Treatment in Children 5 years and younger

	STEP 1	STEP 2	STEP 3	STEP 4
Preferred Controller Choice		Daily Low dose ICS	Double 'low dose' ICS	Continue controller and refer for specialist assessment
Other Controller options		*Leukotriene receptor antagonist (LTRA)* *Intermittent ICS*	*Low dose ICS + LTRA*	*Add LTRA* *Increase ICS frequency*
Reliever	*As-needed short-acting beta$_2$-agonist (all children)*			
Consider this step for children with:	Infrequent viral wheezing and no or few interval symptoms	Symptom pattern consistent with asthma and asthma symptoms not well-controlled, or ≥3 exacerbations per year Symptom pattern not consistent with asthma but wheezing episodes occur frequently, e.g every 6-8 weeks Give diagnostic trial for 3 months	Asthma diagnosis, and not well-controlled on low dose ICS	Not well-controlled on double ICS
			First check diagnosis, inhaler skills, adherence, exposures	



Treatment in Children 6 years and older

Asthma management based on levels of control is a step up and step down approach as shown in the table below:

	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Preferred Controller Choice		Low dose ICS	Medium dose ICS	Med/high dose ICS/ LABA	Refer paediatric respiratory physician or add-on treatment e.g tiotropium (for patients >12years), anti-IgE, anti-IL5
Other Controller options	*Consider low dose ICS*	*Leukotriene receptor antagonist (LTRA)* Low dose theophylline*	*Low dose ICS/ LABA* *Low dose ICS + LTRA* *(or + theophylline*)*	*Med/high dose ICS + LTRA* *(or + theophylline*)*	*Add low dose OCS*
Reliever	As-needed short-acting beta$_2$-agonist (all children)				

*Not for children < 12 years

Footnote: ICS = Inhaled corticosteroids, LABA = long acting beta$_2$-agonist, OCS = oral cortiscosteroids

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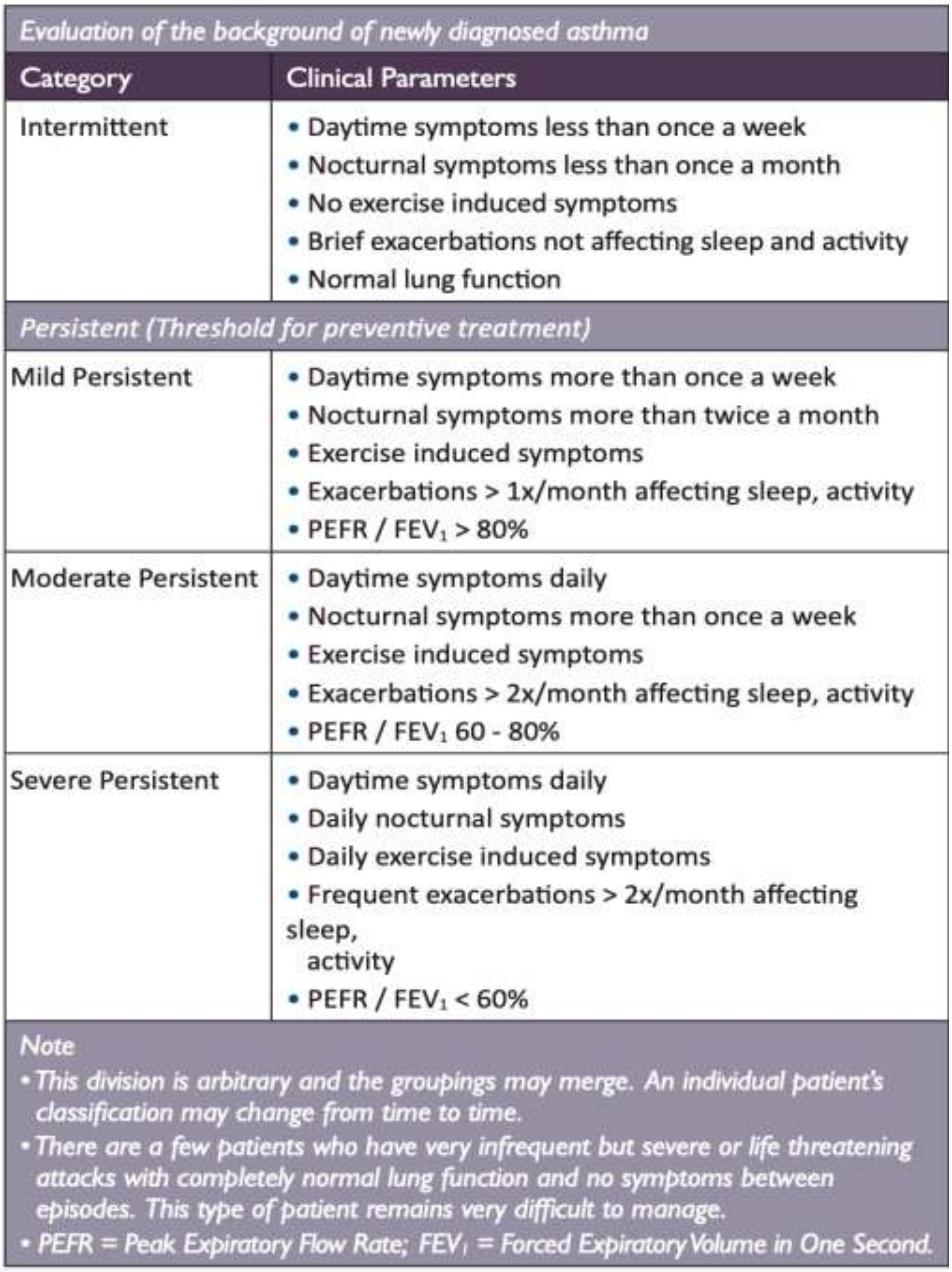


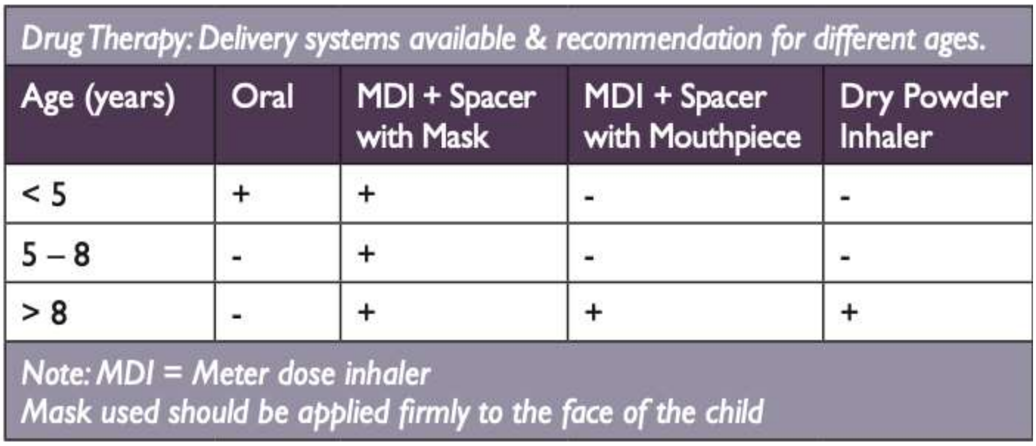
Evaluation of the background of newly diagnosed asthma

Category	Clinical Parameters
Intermittent	• Daytime symptoms less than once a week • Nocturnal symptoms less than once a month • No exercise induced symptoms • Brief exacerbations not affecting sleep and activity • Normal lung function
Persistent (Threshold for preventive treatment)	
Mild Persistent	• Daytime symptoms more than once a week • Nocturnal symptoms more than twice a month • Exercise induced symptoms • Exacerbations > 1x/month affecting sleep, activity • PEFR / FEV$_1$ > 80%
Moderate Persistent	• Daytime symptoms daily • Nocturnal symptoms more than once a week • Exercise induced symptoms • Exacerbations > 2x/month affecting sleep, activity • PEFR / FEV$_1$ 60 - 80%
Severe Persistent	• Daytime symptoms daily • Daily nocturnal symptoms • Daily exercise induced symptoms • Frequent exacerbations > 2x/month affecting sleep, activity • PEFR / FEV$_1$ < 60%

Note

- *This division is arbitrary and the groupings may merge. An individual patient's classification may change from time to time.*
- *There are a few patients who have very infrequent but severe or life threatening attacks with completely normal lung function and no symptoms between episodes. This type of patient remains very difficult to manage.*
- *PEFR = Peak Expiratory Flow Rate; FEV$_1$ = Forced Expiratory Volume in One Second.*

Drug Therapy and Delivery Devices



Drug Therapy: Delivery systems available & recommendation for different ages.

Age (years)	Oral	MDI + Spacer with Mask	MDI + Spacer with Mouthpiece	Dry Powder Inhaler
< 5	+	+	-	-
5 – 8	-	+	-	-
> 8	-	+	+	+

Note: MDI = Meter dose inhaler
Mask used should be applied firmly to the face of the child

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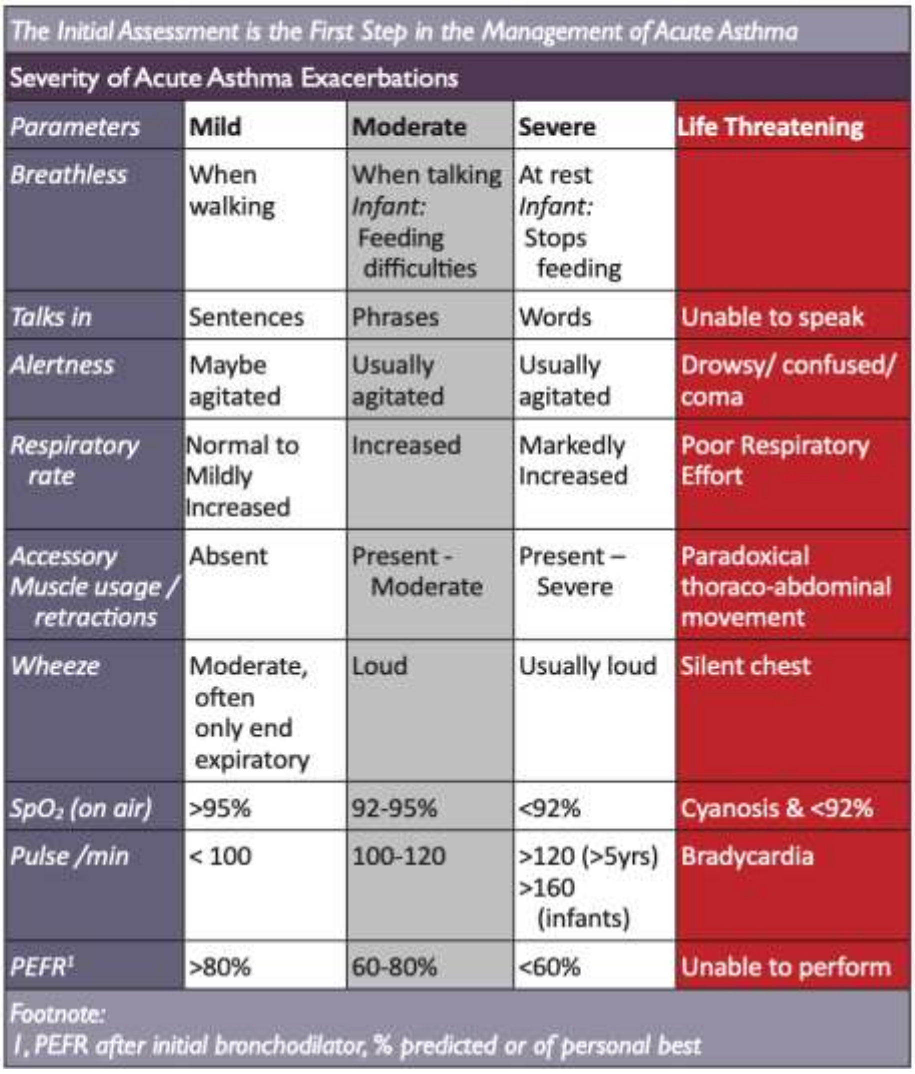


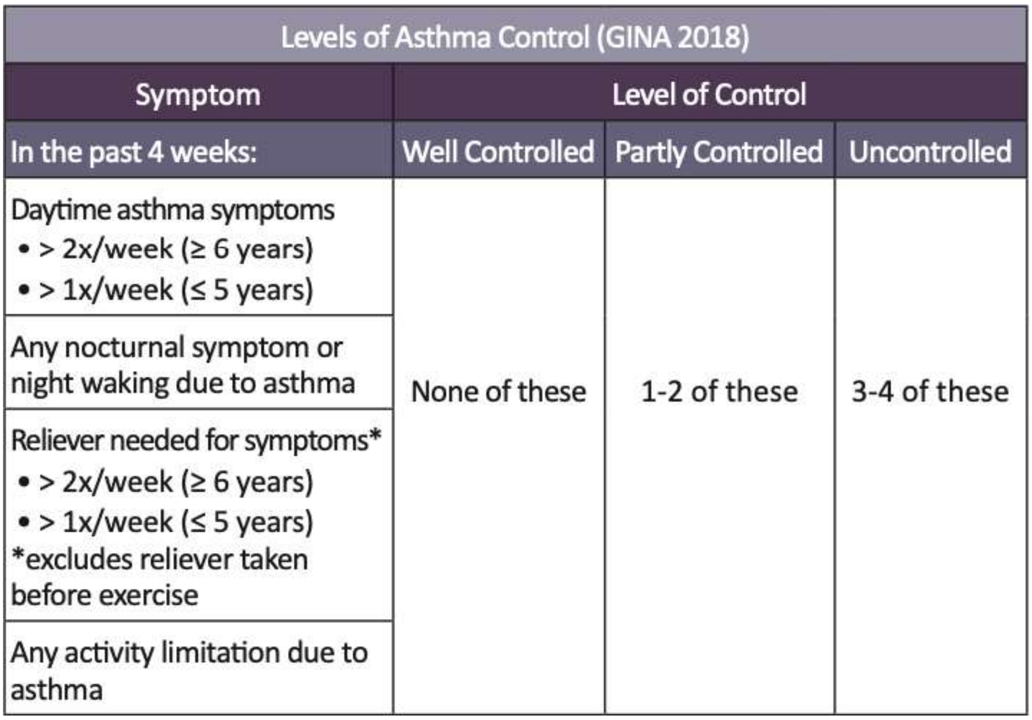
The Initial Assessment is the First Step in the Management of Acute Asthma

Severity of Acute Asthma Exacerbations

Parameters	**Mild**	**Moderate**	**Severe**	**Life Threatening**
Breathless	When walking	When talking *Infant:* Feeding difficulties	At rest *Infant:* Stops feeding	
Talks in	Sentences	Phrases	Words	Unable to speak
Alertness	Maybe agitated	Usually agitated	Usually agitated	Drowsy/ confused/ coma
Respiratory rate	Normal to Mildly Increased	Increased	Markedly Increased	Poor Respiratory Effort
Accessory Muscle usage / retractions	Absent	Present - Moderate	Present – Severe	Paradoxical thoraco-abdominal movement
Wheeze	Moderate, often only end expiratory	Loud	Usually loud	Silent chest
SpO$_2$ (on air)	>95%	92-95%	<92%	Cyanosis & <92%
Pulse /min	< 100	100-120	>120 (>5yrs) >160 (infants)	Bradycardia
PEFR[1]	>80%	60-80%	<60%	Unable to perform

Footnote:

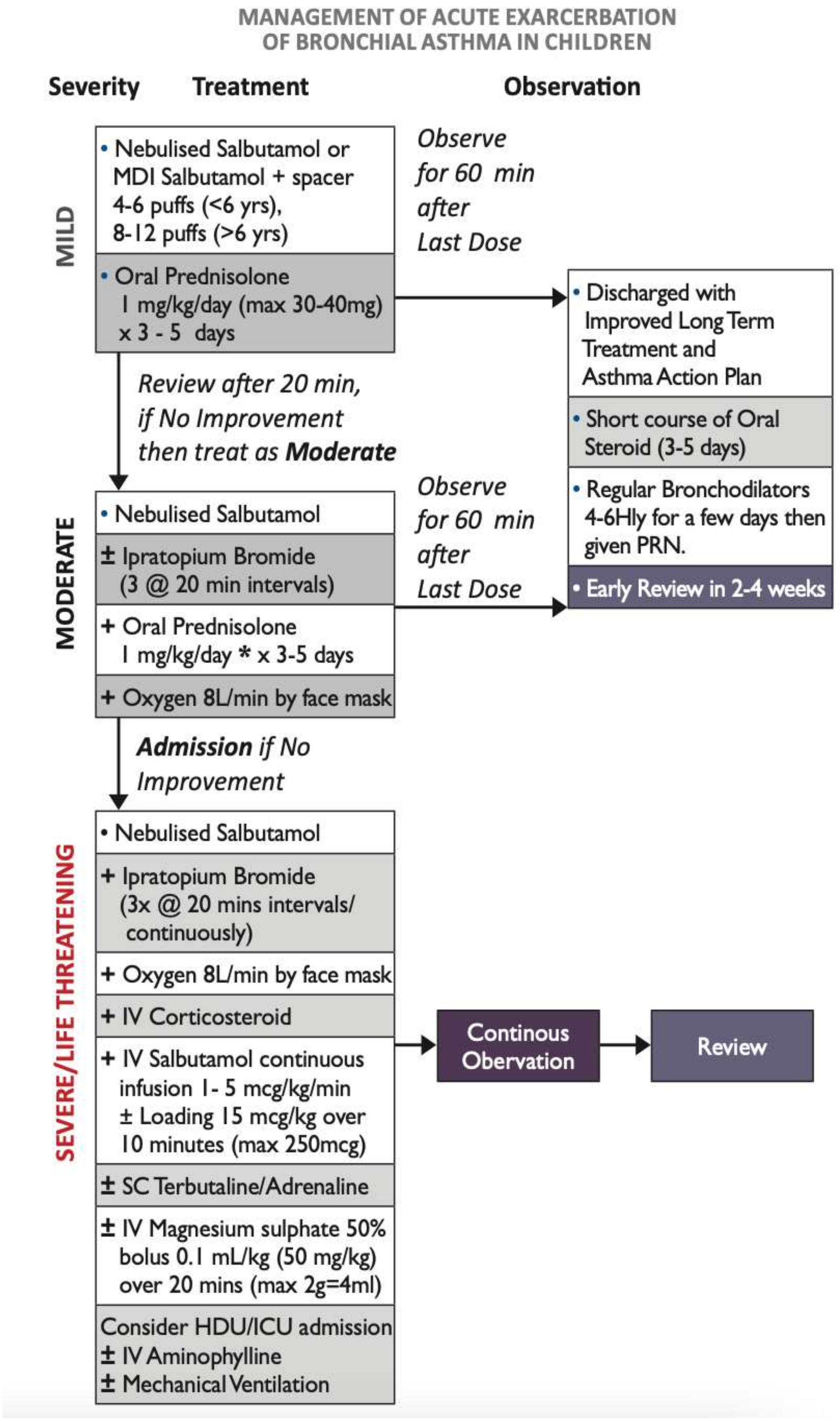
1, PEFR after initial bronchodilator, % predicted or of personal best



Levels of Asthma Control (GINA 2018)

Symptom	Level of Control		
In the past 4 weeks:	Well Controlled	Partly Controlled	Uncontrolled
Daytime asthma symptoms • > 2x/week (≥ 6 years) • > 1x/week (≤ 5 years)	None of these	1-2 of these	3-4 of these
Any nocturnal symptom or night waking due to asthma			
Reliever needed for symptoms* • > 2x/week (≥ 6 years) • > 1x/week (≤ 5 years) *excludes reliever taken before exercise			
Any activity limitation due to asthma			

Date:



MANAGEMENT OF ACUTE EXARCERBATION OF BRONCHIAL ASTHMA IN CHILDREN

Severity **Treatment** **Observation**

MILD

- Nebulised Salbutamol or MDI Salbutamol + spacer 4-6 puffs (<6 yrs), 8-12 puffs (>6 yrs)
- Oral Prednisolone 1 mg/kg/day (max 30-40mg) x 3 - 5 days

Observe for 60 min after Last Dose

Review after 20 min, if No Improvement then treat as ***Moderate***

MODERATE

- Nebulised Salbutamol
- ± Ipratopium Bromide (3 @ 20 min intervals)
- + Oral Prednisolone 1 mg/kg/day * x 3-5 days
- + Oxygen 8L/min by face mask

Observe for 60 min after Last Dose

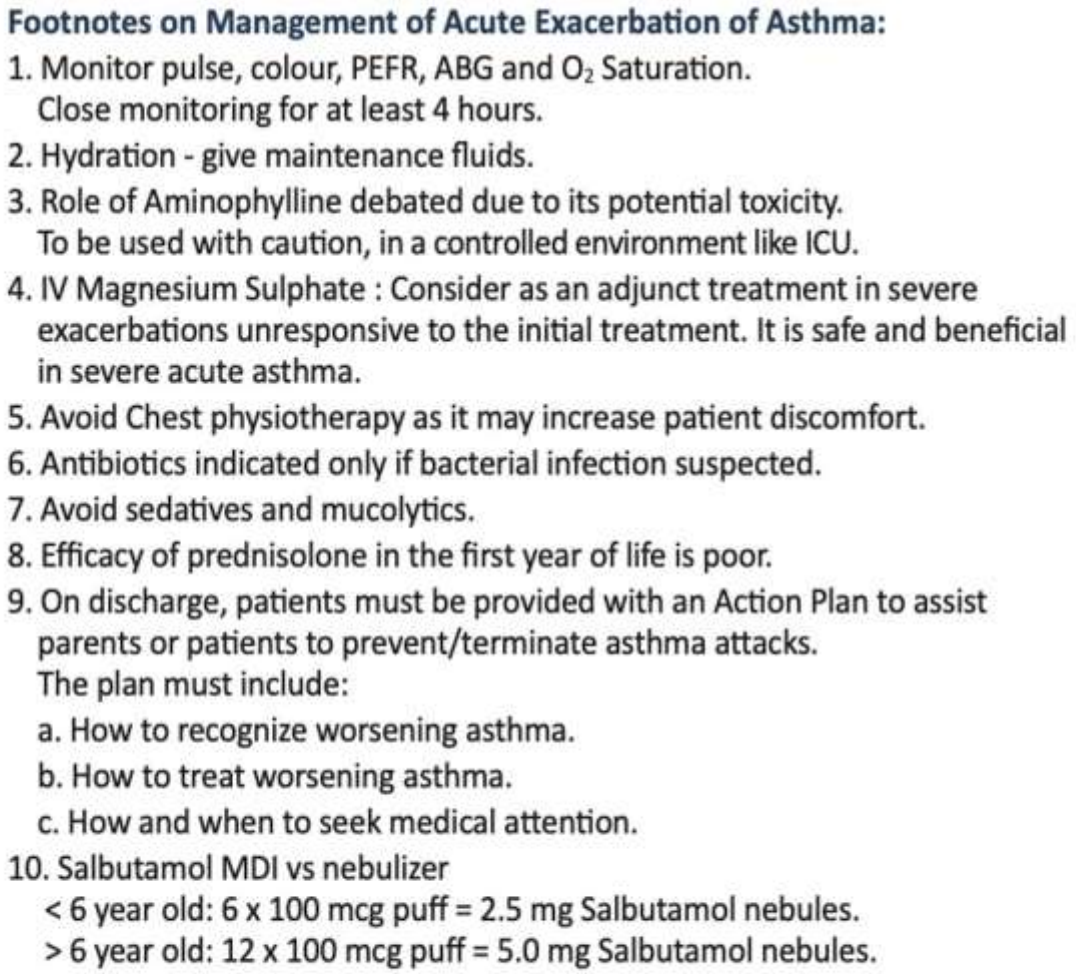
- Discharged with Improved Long Term Treatment and Asthma Action Plan
- Short course of Oral Steroid (3-5 days)
- Regular Bronchodilators 4-6Hly for a few days then given PRN.
- Early Review in 2-4 weeks

Admission *if No Improvement*

SEVERE/LIFE THREATENING

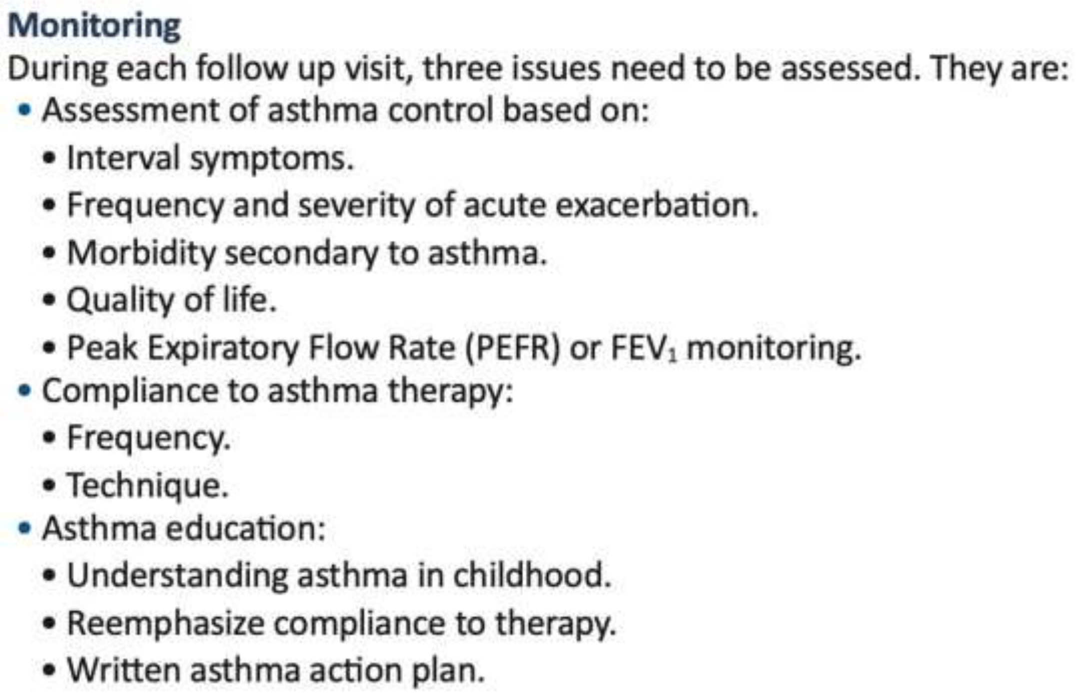
- Nebulised Salbutamol
- + Ipratopium Bromide (3x @ 20 mins intervals/ continuously)
- + Oxygen 8L/min by face mask
- + IV Corticosteroid
- + IV Salbutamol continuous infusion 1- 5 mcg/kg/min ± Loading 15 mcg/kg over 10 minutes (max 250mcg)
- ± SC Terbutaline/Adrenaline
- ± IV Magnesium sulphate 50% bolus 0.1 mL/kg (50 mg/kg) over 20 mins (max 2g=4ml)
- Consider HDU/ICU admission ± IV Aminophylline ± Mechanical Ventilation

Continous Obervation → Review



Footnotes on Management of Acute Exacerbation of Asthma:

1. Monitor pulse, colour, PEFR, ABG and O_2 Saturation.
   Close monitoring for at least 4 hours.
2. Hydration - give maintenance fluids.
3. Role of Aminophylline debated due to its potential toxicity.
   To be used with caution, in a controlled environment like ICU.
4. IV Magnesium Sulphate : Consider as an adjunct treatment in severe exacerbations unresponsive to the initial treatment. It is safe and beneficial in severe acute asthma.
5. Avoid Chest physiotherapy as it may increase patient discomfort.
6. Antibiotics indicated only if bacterial infection suspected.
7. Avoid sedatives and mucolytics.
8. Efficacy of prednisolone in the first year of life is poor.
9. On discharge, patients must be provided with an Action Plan to assist parents or patients to prevent/terminate asthma attacks.
   The plan must include:
   a. How to recognize worsening asthma.
   b. How to treat worsening asthma.
   c. How and when to seek medical attention.
10. Salbutamol MDI vs nebulizer
    < 6 year old: 6 x 100 mcg puff = 2.5 mg Salbutamol nebules.
    > 6 year old: 12 x 100 mcg puff = 5.0 mg Salbutamol nebules.



Monitoring

During each follow up visit, three issues need to be assessed. They are:

- Assessment of asthma control based on:
  - Interval symptoms.
  - Frequency and severity of acute exacerbation.
  - Morbidity secondary to asthma.
  - Quality of life.
  - Peak Expiratory Flow Rate (PEFR) or FEV_1 monitoring.
- Compliance to asthma therapy:
  - Frequency.
  - Technique.
- Asthma education:
  - Understanding asthma in childhood.
  - Reemphasize compliance to therapy.
  - Written asthma action plan.

Date:

GI:

Provisional diagnosis - Includes all the symptoms patient presented

- Acute gastroenteritis with severe dehydration

Differential diagnosis (most likely and most dangerous situation that related to the case) – limit your DDx to only 2 or 3, should be based on the main problems (abd pain, vomiting, diarrhoea)

- Food poisoning (AGE)
- Dengue fever – very common
- UTI
- DKA – if the patient is very thin originally. DKA presents with severe dehydration.
- Put one surgical cause – acute appendicitis, IO (less likely here), volvulus (less likely due to the age group), intussusception (less likely)
- Malaria – malaria itself is not common. And not present like this